

[Topolog](#)

[theheart.org](#)

[Genomic testing to take on unnecessary coronary angiography?](#)

August 21, 2012

Transcript

August 21, 2012

Eric Topol MD: The topic is coronary angiography and whether we need to do so many of them. And the precipitating reason for this segment is the recent [New York Times](#) article published on August 6 and the investigative reporting about the HCA chain and the headlines about unnecessary cardiac work.

This is a real problem, and there have been repetitive reports in the lay press about unnecessary coronary angiography and interventional procedures. In the United States, there are over two million coronary angiograms done [per year], well over 10 000 per day. A study that was using the **ACC** database of nearly 400 000 coronary angiograms done in the US, [published in the New England Journal \[of Medicine\] in 2010](#), showed that about 62% had no significant coronary disease.

Of course, about a fourth, or 30%, are completely normal. So the problem we have here is a deep one, and it probably isn't just HCA, although that perhaps represents an extreme, and there were physicians who were reporting and paraprofessionals reporting colleagues because they felt there were procedures that were being done unnecessarily. But the question is do we need to do over two million angiograms in the United States each year? And do some result perhaps in unnecessary revascularization procedures because of the true, true unrelated principle—that is, there is a narrowing in that small percent that have a narrowing of the two million, relatively small, and then stand its place, but is that actually the reason for this ambiguous or even positive, potentially false-positive test?

Now there were some recent criteria that the ACC put out, through the ABIM (**American Board of Internal Medicine**) [Choosing Wisely Campaign](#), trying to limit unnecessary coronary angiography. I'm not sure if that had any effect. But it's curious. This is expensive, there is radiation involved, there are alternatives. And I want to just mention one alternative.

Back in 2010, [we published in Annals of Internal Medicine](#) [a report on a] test that was a gene-expression test, looking at 21 genes that could pick up whether or not there was significant coronary disease or the absence thereof. And that test, just in the last week or so, has been approved for reimbursement by **Medicare**. So it's about some \$1000 thereabouts for the cost of the test, but it's a blood test that could be useful in patients who have an ambiguous or potentially suspicious false-positive functional test.

So I don't know if it will get used, because obviously there is a predilection to using coronary angiography, but it seems as though we have a new alternative that could help reduce this call from the various reports, including this most recent one of HCA, that too many procedures are being done.

So I'll be interested in your thoughts. Of course there is CTA, as CT angiography, but that's still in most places a significant amount of radiation exposure, it's expensive, and it is not reimbursed. And so what do we do to try to reduce the need for unneeded or unnecessary or normal or no obstructive disease coronary angiograms?

I'll be really interested in your comments, and help me here, I'm trying to see what are the new tactics that we could use to reduce the exposure of cardiologists who are being called out for doing too many procedures. Thanks for your attention.